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Chicago. Dept. of Streets & Electricity
Report. 1945

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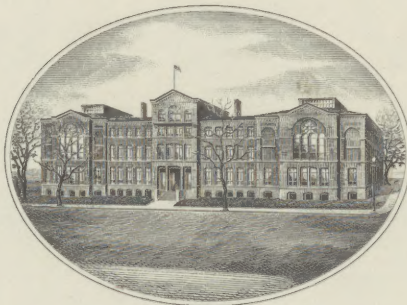


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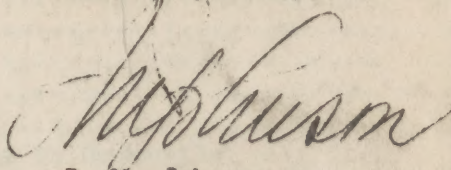
June 26, 1945.

Honorable John J. Grealis,
Chairman,
and Members of the Sub-Committee
on Improvement of Refuse Collection

Gentlemen:

Complying with your request, the Department of Streets
and Electricity is pleased to present to you herewith a
report on refuse collection.

Yours very truly,

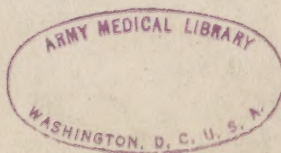


L. M. Johnson
Commissioner of Streets and Electricity

LMJ:MC

Committee Members

Alderman Oscar DePriest	Alderman Harry L. Sain
Alderman Arthur G. Lindell	Alderman George D. Kells
Alderman Bryan Hartnett	Alderman William J. Cowhey
Alderman John J. Duffy	Alderman Theron W. Merryman



June 26, 1945

Department of Justice
Federal Bureau of Investigation
Washington, D. C.

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1945

Enclosed for the Bureau are two copies of a letterhead memorandum from the New York Office, dated June 22, 1945, captioned as above.

Very truly yours,
Special Agent in Charge

Enclosure

29 OCT '48

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INTRODUCTION

The City of Chicago furnishes free refuse collection and disposal service for private dwellings, stove heated apartments and centrally heated apartment buildings of less than five living units. If requested, the city must furnish collection service for all garbage from any type of building, except not more than one container per week from hotels, boarding houses, and restaurants in which more than 20 persons are fed daily. Upon request, the city must also collect up to two containers of ashes and miscellaneous wastes per week from any type of building. With the exceptions noted above, all business and industrial refuse must be collected by private contractors.

The present ordinance does not state that the city must make collections as noted above, but provides specifically the type of refuse which must be handled by private scavengers, leaving the rest to be handled by municipal forces. The present ordinance is antiquated and not consistent with current practice, making it difficult to enforce.

A study of collection methods to learn of ways to improve the service immediately emphasizes the importance of the container to the over-all problem. Without suitable and adequate containers any system is certain to break down from both the sanitation and cost of service viewpoint. However, there are many other conditions which contribute to the quality of the refuse collection service rendered. In this report the department has attempted to discuss the entire refuse collection problem so that all conditions are presented for your consideration.

In your study of methods for improving the refuse collection service for Chicago you will note that the service given in days between collections is not an index of the sanitation or condition of the alleys. When the service fell behind during the severe winter months, some of the alleys remained as clean as when they were on a 7-day service. Some alleys would always be in a deplorable condition even if given a daily service, unless containers are provided. The condition of the alley is determined by the presence or absence of proper containers and the community spirit of the people living there.

INTRODUCTION

The City of Chicago has long been known as a city of great business and commercial importance. It is one of the largest cities in the United States, and its population is constantly increasing. The city is situated on the western shore of Lake Michigan, and its harbor is one of the best in the world. The city is also one of the most important manufacturing centers in the United States, and it is the seat of many of the largest industries in the country. The city is also one of the most important centers of commerce in the United States, and it is the seat of many of the largest banks and financial institutions in the country.

The present study was made for the purpose of determining the extent of the city's business and commercial importance. It was found that the city is one of the most important centers of commerce in the United States, and it is the seat of many of the largest banks and financial institutions in the country. The city is also one of the most important manufacturing centers in the United States, and it is the seat of many of the largest industries in the country.

A study of the city's business and commercial importance was made for the purpose of determining the extent of the city's business and commercial importance. It was found that the city is one of the most important centers of commerce in the United States, and it is the seat of many of the largest banks and financial institutions in the country. The city is also one of the most important manufacturing centers in the United States, and it is the seat of many of the largest industries in the country.

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REFUSE COLLECTION AS A MUNICIPAL ACTIVITY

Responsibility for the collection of refuse and the maintenance of sanitary conditions in streets and alleys must be accepted by city governments. This responsibility is generally discharged by the establishment of a municipal, a contract, or a private refuse collection service. A combination of two or all of these systems is used in many cities. Distinction between the systems is summarized as follows:

Municipal: City pays employees operating in a city department;
Contract: City pays contractor to perform collection service;
Private: Citizens individually pay private collectors for service.

Refuse collection in Chicago is performed for the most part by municipal forces and equipment, with private collectors servicing all places of business.

The advantages of municipal operation for residential refuse are many. Sanitation and the protection of public health are the primary aims of this service, and under municipal operation these aims are not sacrificed for profit. Other things being equal, the cost of municipal operation is less expensive by the amount of profit which a private operator must show.

Management policies are continuous over a long period of years, making it possible to profit from the use of records, experience and training of personnel. Under municipal operation, an effective organization and long range plans can be developed. Long term basis of operation makes possible the purchase of specialized sanitary equipment best suited to the particular needs of the city.

As seasons change throughout the year the quantity of refuse produced varies, making it necessary to keep the organization flexible. This is made possible without employee turnover by transferring employees in municipal service. For instance, street cleaning and refuse collection tend to balance each other, and the same employees may be assigned to either activity. Snow removal and clean up work after storms are effective only if the city has a large organization which can be assigned to this work as the emergency arises.

Refuse collection probably requires more citizen cooperation than any other municipal service. The refuse collection forces are in weekly contact with the resident and are dependent upon his cooperation in furnishing proper containers. This cooperation which is essential to the sanitation of the city, is made more effective under municipal operation.

COLLECTION METHODS

Refuse collection and street cleaning are organized as a division of the Bureau of Streets. A central administrative office and supervisory staff have recently been organized to give general supervision and coordinate the work of the fifty ward superintendents who supervise collections in areas coterminous with the ward boundaries. Refuse collection, street cleaning, rat extermination and equipment assignments are each being given special consideration by personnel assigned to these activities.

Frequency of collection cannot be set arbitrarily. Local climate and sanitary conditions are factors determining the frequency desired. Actual frequency of collection is limited by the appropriations made available. Garbage not regularly collected may overflow containers and provide breeding places for rats, flies and other vermin. Every city should have a rigidly adhered-to schedule of collections determined by the service standards desired. In this climate the weekly collection system for combined refuse, produces satisfactory conditions at a minimum cost to the taxpayer.

Content of Collections

The practice followed by any city as to the content of collections must be co-related to the method of disposal. If refuse is to be incinerated one collection is made for combustibles and another for non-combustibles. Since, at the present time, Chicago finds the use of open dumps the most economical method of disposal, a single collection of all refuse is made. Everything discarded is placed in the same container, making unnecessary the maintenance of separate containers for different kinds of rubbish. The simplicity and economy of this practice recommend the continuance of a single collection wherever possible.

Double Shift Operation

A shortage of equipment makes it necessary to operate all modern equipment two shifts daily. An organization planned for single shift operation is less effective supervising a double shift operation. Service rendered is directly proportional to the effectiveness of the supervisory forces. The arduous work which the refuse loader performs makes it imperative that he be given optimum working conditions. Night work subjects the refuse loader to physical dangers not experienced during daylight working hours. Single shift operation should be resumed as soon as the necessary equipment is made available. The City Council recently authorized a \$2,000,000 bond issue for this purpose which was approved by the voters in the June election.

Private Scavengers

Many buildings in the city have a large amount of refuse which is a by-product of a business activity. The free collection of this refuse by city forces would be the equivalent of subsidizing a few individuals at the expense of all taxpayers. At the present time owners of businesses, industries, hotels, restaurants and large apartment buildings must contract with private scavengers for the removal of waste products. The work of these private scavengers forms an important link in maintaining the well being of the people of Chicago. The private scavenger should conform to the same regulations under which the city forces operate in order that the level of sanitation maintained by municipal collection be not impaired.

Curb Routes

A curb collection is made from containers placed on the curb by the property owner on a designated day of each week. At the present time only 13.8% of all blocks from which collections are made, are operated on a curb route basis. The collection of refuse from the curb offers definite advantages over an alley collection. The use of the proper container becomes almost automatic. The elimination of garbage from the vicinity of the alley is the most effective method of controlling rats. The cost of collection on a curb route is substantially less than for an alley route, making possible a better service with the same appropriation.

Equipment Assignments

Refuse collection service furnished to all parts of the city is the responsibility of the Refuse Collection Division of the Bureau of Streets. The Central Administrative Office accepts full responsibility for the frequency of service furnished in each ward. The ward superintendent, as a representative of this office, is held responsible for the maximum utilization of the equipment and manpower furnished to him. The actual frequency of service is often affected by conditions over which the ward superintendent has little control. The Central Administrative Office maintains a complete record on the utilization of equipment and manpower for each ward and holds the ward superintendent responsible for the proper performance of the duties of all personnel assigned to him.

It is not possible to balance the equipment available among all wards in the city on a permanent basis. Seasonal variations and unforeseen break-downs constantly require adjustment to keep the service in reasonable balance. Neither is it possible to provide a uniform standard of supervision for all areas of the city. Adjustments must likewise be made for, and variations in the quality of man power available. To overcome these varying constantly changing conditions a continuous analysis of operations is maintained by the Central Administrative Office. It is the responsibility of the Administrative Office to make adjustments for these conditions. This does not relieve the ward superintendent, his foremen or any of the operating personnel from full responsibility to perform the duties assigned.

During the present equipment shortage these adjustments appear to work a hardship upon certain wards. Under bad weather conditions, when the city wide service falls behind, special assignments must be made from wards where the service is behind to other wards much farther behind. Occasionally this may mean considerable movement of trucks where an entire area needs help. This should not be considered as a penalty to a ward superintendent for doing an efficient job. That record is entirely independent of the service furnished by the ward. It might well be that the ward normally had a surplus of equipment in comparison with other wards.

The department does not under-estimate the desirability of retaining the same equipment and same personnel in each ward on a permanent basis. There are many advantages in assigning the full responsibility for a single piece of equipment to one ward and to one chauffeur. As soon as sufficient equipment is made available this policy will be placed in effect. However, it is not possible to assign a specific number of trucks to work full time in a given ward. The number of shifts must be restricted to the needs of the ward and appropriations available.

Considerable study is given to all of these conditions by the Administrative Office before any transfers are ordered. No attempt is made to bring the service for the entire city in complete balance, as this would lead to a great amount of confusion in transferring equipment each week. Only extreme cases are handled in this manner. The department believes that no ward or area in the city should be benefitted at the expense of some other ward or area. It is only through the policy established on balancing equipment assignments that the department has been able to maintain a reasonably uniform standard throughout the city.

CONTAINERS

The correct method of storing refuse for collection is so important in keeping a city sanitary and in facilitating loading operations that no compromise in the use of proper containers should be permitted. A program for promoting the universal use of legal containers should be undertaken as soon as satisfactory containers are available. Unfortunately, the best advice indicates that such containers in quantity will not be available for some months. Most of the containers now on the market will not give satisfactory service and the supply would be immediately exhausted if a program were started.

Stationary Containers

Although the installation of stationary vault type containers is prohibited by city ordinance, an appreciable percentage of the containers within the city are of this type. The two main objections to this type of container are the difficulty of maintaining them fly and vermin proof over an appreciable percentage of the life of the container, and the costly and unsanitary loading conditions which they produce. They are responsible for much of the prevailing rat nuisance.

Oil Drums

In a campaign against rats, 55-gallon oil drums were furnished property owners a few years ago. The use of these drums has been unsatisfactory from both a sanitation and operational standpoint, and they should be eliminated when proper containers become available. In most cases the weight of the refuse within the drum makes direct loading impossible, with the result that the refuse is emptied in the alley and shoveled into the truck. This has proved to be an unsanitary and uneconomical procedure.

The use of the oil drum dates back approximately 15 years, at which time some of the wards inaugurated a container program. Every effort was made to make the oil drum usable, including furnishing special covers. Weights were such that frequently three or four men were required to handle the drums, resulting in considerable confusion and hardship on the laborers.

It is impossible to anticipate in advance whether the oil drum will require one, two or three or four men to lift it. It is not unusual to find oil drums weighing 400 pounds and more, and a normal winter output of ashes and garbage will weigh 250 pounds. Excessive strains and ruptures are certain to accompany such procedures where supervision requires that the container must be emptied into the truck in one operation.

Although it is possible to load light refuse from a drum in certain areas of the city and during certain seasons of the year, it is not practical for all areas and at all seasons. A collection system must be uniform to be

The first part of the report deals with the general situation of the country. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's development.

The second part of the report deals with the economic situation of the country. It is a very interesting and informative study of the country's economic development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's economic development.

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effectively supervised. Under the most careful supervision, it has been found impossible to enforce a regulation requiring that all oil drums be dumped directly into the collection vehicle. This operation tends to become routine with every drum being dumped on the pavement, regardless of the type and quantity of refuse. The dumping and shoveling operation results in glass and refuse being strewn on the alley pavement, contributes to the rat nuisance and wastes manpower.

There is no implication in these remarks that the oil drum is not an improvement over no container at all. Until standard containers, as specified herein, are made available, every effort should be made to secure as many oil drums as possible.

Standard Containers

The department believes a better compliance will be obtained if the full responsibility for furnishing containers is placed upon the owner. The design and size of the container should be uniform and convenient for easy loading. It should be of sturdy construction and fly and vermin proof.

Location of Containers

The location of the container is important from both the sanitation and convenience viewpoints. It should never be placed on public property (except for curb routes) but it should be accessible through a gate or opening to the loading crews. On curb route collections it is important that the container be removed from the street as soon as the collection has been made. Containers for both residential and business refuse should be located so as not to constitute a nuisance to adjacent property.

Importance of Containers to a Community

Much publicity is given to the subject of rat control. The Department of Streets and Electricity is attempting to reduce the number of rats within the city by extermination, but this program is hampered as long as the propagation of rodents is invited by the absence of proper containers. Refuse strewn in the alley provides a breeding place for flies and produces obnoxious odors. An alley in which indiscriminate dumping is the rule is not only an eyesore, but also a menace to the health of the community.

1. The first part of the report deals with the general situation of the country and the progress of the work during the year. It also mentions the results of the various expeditions and the collection of new species.

2. The second part of the report deals with the results of the various expeditions and the collection of new species. It also mentions the progress of the work during the year.

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Program for Promoting Use of Containers

Findings of the refuse collection survey indicate a need for standard containers in most areas of the city. Some areas are without any type of container. Sections better supplied with containers show little conformity to the requirements of the city ordinance. Many property owners who are careful to place garbage in a satisfactory container, make no attempt to provide containers for ashes and other rubbish. The existence of these conditions calls for the development of a comprehensive program of education and enforcement. This program should include the following:

1. Much publicity should be given to the program not only in the daily newspapers, but also through schools, community papers, radio and other organizations;
2. Specifications of the standard containers should be given wide-spread publicity so that property owners will be aware of the requirements;
3. Commercial distributors of containers should be encouraged to promote the sale of standard containers;
4. The city should undertake the distribution of containers through the ward forces, placing the responsibility of the sales program on the ward office. It is suggested that the sales be effected by requiring the purchaser to forward the money to the City Collector's office, the container to be delivered upon receipt of notice from the Collector's office; or in such manner as approved by the City Collector's office. It is further suggested that containers be sold at cost price, the city absorbing all the sales and distributing costs.
5. It is further recommended that a police officer be made available in each ward to enforce the provisions of this ordinance. Unless the enforcement is aggressively attacked through the police and courts, it is unlikely that reasonable compliance will be secured.

Any improvement in the use of refuse containers will immediately result in an improvement in service. Good containers make for easy loading, thereby increasing the daily capacity of the equipment. Present equipment, although inadequate for current alley conditions, would be sufficient to furnish a consistent 7-day service if the entire city were supplied with suitable containers.

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Financing the Program

As a practical expedient it has been often suggested that the city furnish containers free of charge. It is estimated that a satisfactory container of sturdy construction with a substantial re-enforced rim at the top and bottom, will cost the city between \$4.00 and \$5.00. The cheaper container sold on a price basis is not satisfactory for this use. The department estimates that approximately 500,000 containers are required for all living units serviced by the city. Assuming an average life of three years, furnishing this type of container will cost the city approximately \$750,000.00 annually. For this reason the department has not recommended this procedure.

It is estimated that at the present time there are 125,000 living units without any type of container and another 125,000 living units which have improper portable containers which should be replaced. In addition, there are still 125,000 stationary containers which should be replaced as soon as suitable containers are available. The immediate cost of supplying these 375,000 containers would be over \$1,500,000.00.

The first part of the paper discusses the importance of maintaining accurate records of all transactions. It is essential for the company to have a clear and concise system in place to ensure that all data is properly recorded and stored. This will allow for easy access and retrieval of information when needed.

The second part of the paper focuses on the importance of regular communication and collaboration between all team members. It is crucial for everyone to stay informed about the company's goals and objectives, as well as the progress of various projects. Regular meetings and updates will help to ensure that everyone is working towards the same goals and that any issues are identified and resolved promptly.

The third part of the paper discusses the importance of maintaining a high level of security for all company data. It is essential to implement strong security measures to protect sensitive information from unauthorized access or theft. This includes using secure communication channels, implementing strong passwords, and regularly updating software and systems.

The fourth part of the paper focuses on the importance of maintaining a high level of customer satisfaction. It is essential to provide excellent customer service and support to all clients, as this will help to build a strong and loyal customer base. This includes responding to customer inquiries promptly, addressing any issues or concerns, and providing high-quality products and services.

The fifth part of the paper discusses the importance of maintaining a high level of financial stability. It is essential to carefully manage the company's finances to ensure that it remains profitable and able to meet its obligations. This includes monitoring cash flow, controlling expenses, and regularly reviewing financial statements.

The sixth part of the paper focuses on the importance of maintaining a high level of employee satisfaction. It is essential to create a positive and supportive work environment for all employees, as this will help to attract and retain top talent. This includes providing fair compensation and benefits, offering opportunities for professional growth and development, and fostering a culture of respect and collaboration.

The seventh part of the paper discusses the importance of maintaining a high level of innovation and creativity. It is essential to encourage all employees to think outside the box and come up with new ideas and solutions. This includes providing a supportive environment for experimentation and risk-taking, as well as recognizing and rewarding innovative ideas and achievements.

The eighth part of the paper focuses on the importance of maintaining a high level of transparency and accountability. It is essential to be open and honest about all company activities and decisions, as this will help to build trust and credibility with all stakeholders. This includes providing regular updates on the company's performance and financial status, as well as being accountable for any mistakes or failures.

The ninth part of the paper discusses the importance of maintaining a high level of social responsibility. It is essential to consider the impact of the company's actions on the environment and society, as well as to actively engage in social and environmental initiatives. This includes reducing the company's carbon footprint, supporting local communities, and promoting ethical business practices.

The tenth part of the paper focuses on the importance of maintaining a high level of flexibility and adaptability. It is essential to be able to quickly respond to changes in the market and industry, as this will help to ensure the company's long-term success. This includes being open to new ideas and technologies, as well as being willing to make necessary adjustments to the company's strategy and operations.

EQUIPMENT

An equipment service division is operated by the Bureau of Streets for the purpose of furnishing rolling equipment for the various activities of that Bureau. A capital account or revolving fund has been set up for this division which derives its revenue from rental charges covering maintenance and depreciation costs.

Maintenance of Equipment

Maintenance of refuse collection trucks with automatic loading devices presents more complicated problems than are present in the maintenance of ordinary dump trucks. Mechanical breakdowns are costly in that the time of the loading crew and chauffeur is lost. Sufficient equipment should be available at all times so that any breakdown can be replaced with a minimum of lost time. This type of service can best be furnished under municipal operation.

Types of Equipment

Specialized refuse collection trucks with enclosed bodies and using automatic loading devices have been developed in the past few years. Due to shortages in critical materials Chicago was forced to order some open type trucks as a temporary expedient. Future orders should be for enclosed trucks using automatic loading devices which reduce the loading height. The enclosed truck is free of many objectionable features of the open garbage truck. Working conditions with this new type of equipment are much improved and subject the loader to less physical strain and possible injury. Automatic loading equipment has not been used sufficiently long to obtain significant conclusions as to the most economical type for use under operating conditions existent in the city of Chicago. Tests are being conducted and will be continued so that performance of the various trucks can be evaluated on a factual basis.

Capacity of Equipment

The introduction in recent years of equipment of irregular body shapes and various types of loading devices has produced a need for standardizing the capacity of all types of trucks. A cubic yard of refuse is a variable unit of measure unless it be controlled by very definite conditions. The types of materials and the methods of loading vary considerably, with the result that the actual displacement in cubic yards may not be comparable between two different types of equipment.

For instance, loading an open truck without a top man tends to produce a bulky load with excessive voids. However, if a top man is used to arrange the load, the full capacity of the truck body would be utilized. A standard cubic yard of refuse by definition could be the quantity of refuse contained

MEMORANDUM

TO : Mr. Tolson
FROM : Mr. [illegible]
SUBJECT: [illegible]

[illegible text block]

[illegible text block]

[illegible text block]

in one cubic yard of space when loaded into an open truck without the use of mechanical loading devices, but using a top man to arrange the load. War body #611 was calibrated (measured) at a capacity of 11.8 cubic yards water level. If this truck were properly loaded, level full, it would therefore contain 11.8 cubic yards of refuse. In order to accomplish this the following procedure was adopted.

The piece of equipment which was being calibrated was loaded in the alley under actual operating conditions and the load was dumped on a selected flat area in such a manner that the material could be reloaded from both the sides and rear of the truck. Truck #611 was then loaded by three loaders, one on each side and one in the rear. A fourth man of average size (weight, 180 pounds) remained in the truck during the entire loading period and distributed the refuse as it was loaded, breaking boxes and arranging the material to leave a minimum of voids. The loading operation continued to the point where a 2x4 could be placed across the body of the truck and would touch both sides and be in contact with the refuse the entire width of the truck. A smaller box of 2 cubic yards capacity, being 6 feet long by 3 feet wide and 3 feet high, was used to calibrate any refuse left over. This box was loaded in the same manner as was the truck.

It was observed in making these measurements that the effectiveness of elimination of voids is the principal factor in minimizing the space occupied by the refuse. Little space was gained by compression of the material. Most of the loads were weighed before being calibrated. Very little relationship was found between the net weight of the load and the space occupied by the load.

The results of this survey indicate that the volume method of measurement is more reliable if the equipment is properly calibrated to standard cubic yard capacities. Typical loads, therefore, are being calibrated during the various seasons of the year and average capacities determined for each class of equipment.

Selection of Equipment

The department is presently giving considerable study to the determination of the type and size of equipment which best meets the needs of the city. Mechanical loading devices have reduced the loading height of refuse collection equipment, making it easier for the loader to place the refuse in the truck. It is fundamental that the easier the operation is made the more refuse the loader will load in a normal day's work and with less fatigue at the end of the workday. It follows that better working conditions will attract better loaders.

The size of equipment is limited by the widths of the alleys the equipment must service and the roads, both alley and dump, which the equipment must traverse. In Chicago many of the alleys are narrow with turns which must be traversed by refuse trucks. Bodies must therefore be short and the chassis preferably of cab over engine design. It is necessary that all equipment be interchangeable, making it inadvisable to purchase special equipment for these special conditions. The capacity of the equipment and number of loaders must be balanced to provide the most economical operation.

Some of the features which should be studied in the selection of refuse collection equipment are listed below. These features fall within two general classifications, first, the system employed by the city, and second, the specific features of the truck itself. The latter must be studied in relation to local conditions.

1. System employed by the city:

- (a) Type of refuse collected by the city;
- (b) Method of disposal;
- (c) Alley or curb collection;
- (d) Haul distance to dump;
- (e) Width of alleys.

2. Equipment features:

- (a) Ease of loading;
- (b) Safety to loaders;
- (c) Manueverability - length, width and turning radius;
- (d) Cleanliness;
- (e) Cost of operation;
- (f) Dependability;
- (g) Appearance.

The relative importance of these features will vary between cities. Present studies are being conducted for Chicago conditions and the conclusions reached will not, therefore, necessarily apply to any other community.

MUNICIPAL ORDINANCES

As requested by your committee, the department submits herewith suggestions for changes in the municipal code which it is believed will result in an improvement in the sanitation of the city's streets and alleys.

Refuse collection methods and practices must be changed from time to time to keep pace with changing conditions. The present ordinances covering refuse collection are not consistent with current practices and should be brought up to date. Ambiguities lead to misunderstanding on the part of the operating force and the public as well as to ineffective enforcement of ordinance provisions.

The following suggestions are made for further consideration by the Committee on Refuse Collection.

1. The words "garbage", "ashes", and "miscellaneous wastes" should be omitted from the ordinance and the word "refuse" substituted. Refuse should be defined for the purpose of this ordinance as including rejected household food, ashes and miscellaneous wastes, but should not include discarded construction materials.

Incineration dictated the terms of the present ordinance, requiring separation of combustibles from non-combustibles. Under the present system of disposal, there is no reason why the property owner should be placed to the increased expense and inconvenience of furnishing two containers for these two classes of refuse.

2. Municipal service should be furnished to all residential buildings containing less than five flats and to larger tenanted buildings which are not centrally heated, except boarding houses feeding more than 20 people, providing the refuse is placed in containers as hereinafter specified.

The present ordinance provides only what must be handled by private scavengers, it being understood that all other refuse must be collected by the city. A direct statement of what the city should collect, limited by the appropriations made available, would greatly simplify the interpretation of the ordinance. The proposed ordinance differs from present in that the city would not collect any garbage from buildings containing more than four flats. Although this is the general practice now, some owners take advantage of the present ordinance requesting the city to collect garbage from apartment buildings. The proposed ordinance provides for collection of refuse from only residential buildings, whereas the existing ordinance provides that the city collect less than two containers per week of ashes, and miscellaneous wastes from any building. Although this is not the general practice, some owners

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take advantage of the provisions requesting the city to collect refuse from business and larger apartment buildings. These provisions lead to much confusion making it difficult to supervise the collection forces and enforce sanitation requirements.

3. The refuse container should be of not less than 20 gallon, nor more than 30 gallon capacity, of sturdy construction, with suitable handles at the sides midway between the top and bottom, and a tight fitting cover.

The capacity limitations stated above are only tentative, depending upon further study. It is thought best not to limit the container to metal construction as provided at present, in view of possible post war substitutes. Please see discussion on Containers, page 7.

4. It should be the responsibility of the owner to see that at least one container, as specified in Section 3 heretofore, is provided for each living unit or for every five persons living in the building. In case the owner fails to provide the necessary container, possibly the city could supply these containers, the cost of which should become a lien on the property.

The proposed ordinance places all responsibility for the container on the owner, whereas the present ordinance places the responsibility on the owner, agent, or occupant. It is also suggested that the city investigate the possibilities of furnishing the container, the cost of which to become a lien on the property, as a means of enforcement. The legality of this provision will have to be investigated by the Corporation Counsel's office. It provides the only practical solution of obtaining the necessary containers in some of our congested areas.

5. The city should establish the ordinance the same standards of sanitation for private scavengers' equipment as for city equipment. All refuse trucks should be equipped with permanently enclosed bodies of a design approved by the Bureau of Streets, however, permitting the private scavengers a period of three years in which to make the conversion.

From a health and sanitation viewpoint, it is not consistent for private contractors to operate open type trucks, allowing paper and refuse to be blown about the streets and the city use fully enclosed trucks to prevent this nuisance. The enclosed body provides the only sanitary method of hauling refuse on city streets and should be required for all types of refuse.

6. The license fee for private scavengers shall be increased substantially above the present fee of \$25.00 for each vehicle. Each private scavenger truck shall be required to display a sticker on the windshield, indicating that the license fee has been paid for that vehicle. The City Collector's office should issue private scavenger licenses only after the vehicle has been inspected and approved by the Bureau of Streets as to sanitation requirements.

The city's responsibility over private scavengers will be greatly increased with the adoption of the features suggested herein which warrants a substantial increase in the private scavenger's licenses.

7. Each place of business using private scavenger service should be required to display a sticker near the doorway and visible from the alley or street where collections are made, indicating that the business has contracted with a private scavenger for the collection of its refuse.

For enforcement to be effective it is essential that the Bureau of Streets personnel be advised as to which properties have failed to secure the service of a private scavenger. This is tedious and almost impossible unless the business is required to display notification that such service is under contract. The sticker should be designed by the Bureau of Streets, using a color change each year and furnished by the private scavenger, showing his name. It should be illegal for a private scavenger to furnish a sticker unless he is collecting the refuse, and it should likewise be illegal for a business to display a sticker unless he has a contract with the private scavenger for the collection of his refuse. As this provision does not come under the classification of "Nuisances", it is suggested that a fine be imposed for violation of this section of the ordinance.

8. An appeal board should be established by the City Council to hear complaints against abuses by private scavengers.

Many cities have established universal collection because private contractors failed to provide an adequate service at a reasonable price. The department believes that this service can be handled efficiently by private scavengers and should not be taken over by the city unless abuses warrant it. In order to protect the citizens from excessive charges or inadequate service, it is suggested that an appeal board be created to discuss licensing and inspection of equipment with private scavengers and sufficient authority to revoke such licenses when deemed advisable to the best interests of the city.

9. For all city alley collections the container should be located at the alley line but not in the alley. The container should be immediately accessible to the refuse collection crew so that it may be emptied directly in the truck.

For all city curb collections, the refuse containers should be placed at the curb line not earlier than the evening preceding the designated day of collection, and removed not later than the evening of the day of collection.

For all private collections the refuse container should be placed within the property lines and not on public property in such a manner that it will not constitute a nuisance to adjacent property.

It is necessary to supplement our present ordinance for curb collections. Other features of this section are similar to those contained in the present ordinance.

Each of the above sections provides for some change in the existing ordinances. The department believes that these changes will materially facilitate enforcement and improve supervision of refuse collection crews. These features are not intended to provide for a complete ordinance as many sections in the present code should be retained.

There is no implication in these suggestions that correcting the municipal code automatically will improve the refuse collection service. However, adequate code coverage should make possible a vigorous campaign of enforcement, without which clean sanitary alleys are impossible.

SUMMARY

The Department of Streets and Electricity submits herewith a summary of its suggestions for improving refuse collection service:

1. Municipal service should be furnished to all residential buildings containing less than five flats and to larger tenanted buildings which are not centrally heated, providing the refuse is placed in proper containers as specified.
2. The universal use of proper refuse containers is essential to maintaining clean, sanitary alleys and to the economical collection of refuse.
 - a. The refuse container should be of not less than 20-gallon nor more than 30-gallon capacity.
 - b. Not less than one container should be required for each family unit or each five persons.
 - c. The owner should be held responsible for furnishing proper containers.
 - d. A publicity program should be inaugurated as soon as proper containers are made available, using pamphlets, schools, community newspapers and radio.
 - e. The city should purchase and distribute containers on a cost basis.
 - f. A police officer should be made available to the ward superintendents to aggressively enforce the code.
3. The operation of two shifts per day should be reduced to a single shift operation as soon as the necessary equipment is made available. (A bond issue has already been approved for this purpose.)
4. All municipal refuse collection equipment should provide for clean and sanitary handling of refuse, using an enclosed body with easy loading facilities.

5. Private scavenger contractors should be required to comply with the same sanitation requirements as observed by the city.
- a. Enclosed equipment should be used, allowing three years for the conversion.
 - b. Equipment should be inspected by the Bureau of Streets before license is granted.
 - c. Each place of business using private scavenger service should be required to display a sticker near the doorway and visible from the alley or street where collections are made, indicating that the business has contracted with a private scavenger for the collection of its refuse.
 - d. An Appeal Board should be established by the City Council to hear complaints against abuses by private scavengers.
 - e. The license fee per vehicle should be increased to cover the increased cost of the above inspections.



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